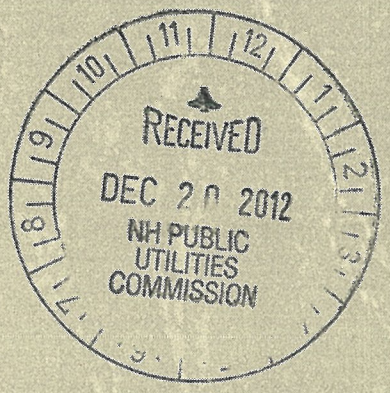
DE12-361

White Mountain Hydroelectric Corporation

P.O. Box 715
Lincoln, New Hampshire 03251
~ 603-745-2430 ~



Debra A. Howland, Executive Director
NH Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, NH 03301-2429

December 14, 2012

Dear Ms. Howland:

White Mt. Hydroelectric is seeking certification as a Class IV source. Enclosed please find our application for same.

Contact information:

Peter F. Govoni
603-745-2430
pfg51@myfairpoint.net

Thomas S. Clark
603-745-3074

Yours truly,

Peter F. Govoni
Treasurer

State of New Hampshire

Public Utilities Commission

APPLICATION FORM FOR

RENEWABLE ENERGY SOURCE ELIGIBILITY FOR CLASS IV

HYDRO SOURCES WITH A TOTAL NAMEPLATE CAPACITY OF ONE MEGAWATT OR LESS

Pursuant to New Hampshire Administrative Code Puc 2500 Rules, Puc 2505.02 Application Requirements Laws of 2012, Chapter 0272

- Please submit one (1) original and two (2) paper copies of the completed application and cover letter to:

Debra A. Howland
Executive Director
New Hampshire Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, NH 03301-2429

- Send an electronic version of the completed application and the cover letter electronically to executive.director@puc.nh.gov.

The cover letter must include complete contact information and clearly state that the applicant is seeking certification as a Class IV source. Pursuant to Chapter 362-F:11 I, the Commission is required to render a decision on an application within 45 days upon receiving a completed application.

If you have any questions please contact Barbara Bernstein at (603)271-6011 or Barbara.Bernstein@puc.nh.gov.

Please provide the following:

1. Applicant Name: White Mt. Hydroelectric Corp.

Mailing Address: PO Boc 715

Town/City: Lincoln State: NH Zip Code: 03251

Primary Contact: Peter F. Govoni

Telephone: 603-745-2430 Cell: 603-348-8889

Email address: pfg51@myfairpoint.net

2. Facility Name: White Mt. Hydroelectric, Littleton station

(physical address) 82 Carlton St.

Town/City: Littleton State: NH
Zip Code: 03561

If the facility does not have a physical address, the Latitude _____ & Longitude _

(To qualify the electrical production for RECs, the facility must be registered with the NEPOOL - GIS).

Contact information for the GIS administrator follows:

James Webb, Registry Administrator, APX Environmental Markets
224 Airport Parkway, Suite 600, San Jose, CA 95110
Office: 408.517.2174, jwebb@apx.com

3. The facility's ISO-New England asset identification number, if available. n/a_____

4. The facility's GIS facility code, if available. n/a_____

5. A description of the facility including the following:

   5.a. The gross nameplate capacity 426 KW

   5.b. The facility's initial commercial operation date 12/14/80

   5.c. The date the facility began operation, if different than the operation date _____

   5.d. A complete description of the facility including related equipment

Consists of one (1) verticle machine, rated at approx. 425 KW, 4160 volts. This machine has a Kaplan style runner.

6. A copy of all necessary state and federal (FERC) regulatory approvals as **Attachment A.** 6 total pages,

7. A copy of the title page of the Interconnection Agreement between the applicant and the distribution utility, the page(s) that identifies the nameplate capacity of the facility and the signature pages. Please provide this information as **Attachment B. 4 total pages.**

8. A description of how the generation facility is connected to the distribution utility.

The Littleton generator is rated at approx. 425 KW at 2400 volts.The output of this machine is transformed from 2400 volts delta to 4160 volts ungrounded wye and fed to the Littleton Water and Light distrubution system. The generator is voltage and var regulated.

9. A statement as to whether the facility has been certified under another non-federal jurisdiction's renewable portfolio standard and proof thereof.

White Mt. Hydro (Littleton plant) is not certified under any other non-federal jurisdiction's renewable portfolio standard.

10. A statement as to whether the facility's output has been verified by ISO-New England.

n/a

11. An affidavit by the applicant attesting that the contents of the application are accurate. Use either the Affidavit at the bottom of this page, or provide a separate document as **Attachment C.**

12. The name and telephone number of the facility's operator, **if different from the owner**.

Facility Operator Name: Thomas Clark

Phone: 603-745-3074

13. Other pertinent information that you wish to include to assist in classification of the facility provide as **Attachment D.**

CHECK LIST: The following has been included to complete the application:	**YES**
• All contact information requested in the application.	yes
• A copy of all necessary state and federal (FERC) regulatory approvals as **Attachment A.**	yes
• A copy of the title page of the Interconnection Agreement between the applicant and the distribution utility, the page(s) that identifies the nameplate capacity of the facility and the signature pages as **Attachment B.**	yes
• A signed and notarized attestation or **Attachment C.**	yes
• A GIS number has been provided or has been requested.	yes
• Other pertinent information has been provided (if necessary) as **Attachment D.**	
• This document has been printed and notarized.	yes

• The original and two copies are included in the packet mailed to Debra Howland, Executive Director of the PUC.	yes
• An electronic version of the completed application has been sent to executive.director@puc.nh.gov .	yes

AFFIDAVIT

The Undersigned applicant declares under penalty of perjury that contents of this application are accurate.

Applicant's Signature _____ Date 12-18-12

Subscribed and sworn before me this 18TH Day of Dec. (month) in the year 2012

CINDY SIMMONS

County of GRAFTON State of NH

Cindy Simmons
Notary Public/~~Justice of the Peace~~

My Commission Expires _____

OFFICIAL SEAL
CINDY E. SIMMONS
NOTARY PUBLIC - N.H.
My Comm. Expires March 30, 2016

FEDERAL ENERGY REGULATORY COMMISSION

ROUTING CODE _____

WASHINGTON, D.C. 20426

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P-11313 115311
THOMAS CLARK MANAGER
WHITE MOUNTAIN HYDROELECTRIC CORP. (NH
APTHORP DAM HYDROELECTRIC PROJECT
P.O. BOX 308
NORTH WOODSTOCK, NH 03262

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Elizabeth Anne Moler, Chair;
Vicky A. Bailey, James J. Hoecker,
William L. Massey, and Donald F. Santa, Jr.

Edward M. Clark) Project No. 11313-000

ORDER ISSUING LICENSE
(Minor Project)

(Issued October 17, 1995)

In 1988, the Director, Office of Hydropower Licensing, determined that the existing unlicensed Apthorp Project, located on the Ammonoosuc River in Grafton County, New Hampshire, is required to be licensed. 1/ The project is owned by the Town of Littleton, New Hampshire, and since 1979 has been operated by White Mountain Hydroelectric Company (White Mountain), a company owned by Edward M. Clark (Clark). In July 1992, Clark filed an application for an original license for the continued operation and maintenance of the project. 2/ Clark also proposes some new construction, as described below.

1/ 45 FERC ¶ 62,173. The project has been operating since 1917, except for the period from 1971 to 1978. In 1936, the dam was rebuilt, a new powerhouse was constructed, and the project's capacity was increased from 150 to 425 kilowatts.

The Ammonoosuc River is a tributary of the Connecticut River, a navigable waterway of the United States. See 10 FPC 1257 (1951). Power from the project is sold to Littleton Municipal Power and Light Company, which is connected to an interstate grid. Since the project is located on a stream over which Congress has jurisdiction under the Commerce Clause, affects interstate commerce through its connection to an interstate power grid, and has post-1935 construction, it is required to be licensed pursuant to Section 23(b)(1) of the Federal Power Act, 16 U.S.C. § 817(1).

2/ The license application lists Edward M. Clark as the license applicant. Elsewhere in the license application, Clark refers to himself as "dba White Mountain Hydroelectric Company." This license is issued to Clark as an individual, and the proceeding caption is accordingly corrected to reflect this fact.

BACKGROUND

Public notice of the application was published. The New Hampshire Council of Trout Unlimited and the Ammonoosuc Chapter of Trout Unlimited (Trout Unlimited) jointly intervened, opposing issuance of a license for the project. In addition, the State of New Hampshire Fish and Game Department (New Hampshire Fish and Game) and the United States Department of the Interior (Interior) filed comments on the license application.

Commission staff prepared a draft Environmental Assessment (EA) for the proposed project in January 1994. Comments on the draft EA have been addressed in the final EA, which was issued April 1, 1994, and is attached to and made part of this license. A Safety and Design Assessment was also prepared, and is available in the Commission's public file associated with this project.

The motion to intervene and all comments received have been fully considered in determining whether, and under what conditions, to issue a license to Clark.

PROJECT DESCRIPTION

The existing project includes: a reservoir with a surface area of 20 acres; a 20-foot-high, 227.8-foot-long concrete dam; 4-foot-high flashboards across the spillway portion of the dam; an intake structure, with three 4-foot-high, 8-foot-wide vertical slide gates; an 8-foot-diameter, 64-foot-long steel penstock; a powerhouse containing one 425-kilowatt (kW) turbine-generating unit; and a 100-foot-long transmission line. The project operates run-of-river, and is not used for peaking. There is no bypass reach; flows coming from the powerhouse are released into the river immediately below the dam.

Clark proposes to add a new 175-kW turbine generating unit and a downstream fish passage facility. In addition, Clark proposes to maintain the run-of-river mode; provide a minimum flow of 90 cubic feet per second (cfs) downstream of the project when refilling the project impoundment after flashboard installation or an emergency draw-down; maintain the impoundment elevation at 860.9 feet U.S. Geological Survey datum with a fluctuation of no greater than ± 4 inches around the target elevation; and install a stage recorder to monitor the impoundment level and the downstream river levels.

WATER QUALITY CERTIFICATION

Section 401(a) of the Clean Water Act (CWA) requires an applicant for a federal license or permit for any activity which may result in a discharge into navigable waters of the United

States to provide to the licensing or permitting agency a certification from the state in which the discharge originates that such discharge will comply with certain sections of the CWA. 3/

On March 2, 1992, Clark filed a request with the New Hampshire Department of Environmental Services (New Hampshire DES) for water quality certification for the Apthorp Project. New Hampshire DES issued certification on June 26, 1992, which states:

> The following conditions are placed on this section 401 Water Quality Certificate:
>
> 1) The following water quality monitoring program must be enacted the first summer following FERC licensing.
>
> (a) Dissolved oxygen and water temperature must be monitored at three stations in the Ammonoosuc River: upstream of the Apthorp impoundment, at three depths in the impoundment (surface, bottom, and mid-depth), and downstream of the tailrace, as specified by [New Hampshire Department of Environmental Sciences Division of Water Supply and Pollution Control] DES-WSPC.
>
> (b) Monitoring must occur once each month during a non-rain condition for a three day period during the following months: June, July, August, and September. Samples will be collected between 6 am and 8 am.
>
> (c) Equipment calibration and quality control measures must be instituted to assure accurate reporting.
>
> (d) Monitoring will be conducted under as close to limiting water quality conditions as possible (ie. If possible, water temperatures of 20°C or greater and river flows below 50 cfs).
>
> (e) Water quality monitoring and [quality assurance/quality control] QA/QC results must be reported on an annual basis and a yearly

3/ 33 U.S.C. § 1341(a).

> summary report must be submitted to DES-WSPCD. [4/]

Although not specifying the following as conditions of the certification, New Hampshire DES's June 26, 1992 letter further states that:

> If structural and/or operational modifications are made at the Apthorp Project beyond the scope of the plans submitted for review by the New Hampshire DES, the Section 401 certificate shall be void, and a new Section 401 certificate shall be applied for. In addition, if a FERC license for the project is not issued within two years of the issuance of the WQC, this Section 401 certificate is void and a new certificate must be applied for.
>
> The New Hampshire DES reserves the right to gain access to the Apthorp hydroelectric site at any time to check monitoring equipment and records to assure compliance with the State's water quality standards.
>
> All existing water uses will be maintained and protected and at no time shall the Apthorp Project cause Class B water quality standards to be violated. [5/]

Because these statements appear to impose additional conditions on the certification, we will consider them as such.

4/ New Hampshire DES states that, if it later determines that the sampling frequency or number of locations required by the plan is excessive, it may consider an amendment to the monitoring plan requirements.

5/ The Ammonoosuc River, in the vicinity of the Apthorp Project, is designated by the New Hampshire DES-WSPC as Class B waters. Class B waters are acceptable for fishing, swimming, and other recreational purposes; and after adequate treatment, for use as a water supply. For this designation, the New Hampshire water quality standard for dissolved oxygen (DO) requires a DO concentration of no less than 75 percent saturation at all times. As to temperature, the water quality standard provides that increases in water temperature that would appreciably interfere with the designated uses of Class B waters are not permitted.

Under Section 401(d) of the CWA, 6/ states may lawfully impose only conditions relating to water quality, and such lawful conditions contained in the certification become conditions of the license. 7/ To the extent that states include conditions that are unrelated to water quality, these conditions are beyond the scope of Section 401 and can be excluded from the license. 8/

The monitoring plan requirement, the provision requiring site access to monitor the licensee's compliance with state water quality standards, and the requirement that the licensee meet the Class B water quality standards are related to water quality, and are therefore valid conditions of the certification. However, the provision setting forth the circumstances, e.g., structural modifications at the project or the timing of license issuance, under which the licensee must request a new certification is in conflict with Section 401(a)(3) of the CWA, which establishes that certifications may be modified only if the federal licensing or permitting agency -- here the Commission -- determines that new water quality certification is required. 9/ Consequently, this condition is beyond the scope of Section 401 and will not be included in the license.

SECTION 18 FISHWAY PRESCRIPTIONS

Under Section 18 of the Federal Power Act (FPA), the Commission must require a licensee to construct, operate, and maintain such fishways as may be prescribed by the Secretary of the Interior or of Commerce, as appropriate. 10/ By letter dated June 28, 1993, Interior submitted the following conditions pursuant to Section 18:

6/ 33 U.S.C. § 1341(d).

7/ See Tunbridge Mill Corporation, 68 FERC ¶ 61,078 (1994).

8/ Id. at p. 61,388.

9/ Our regulations, 18 C.F.R. § 4.38(7)(ii), provide that, if an applicant seeks to amend its application or license in a manner that the Commission determines would have a material adverse impact in the discharge from the project, it must make a new request for water quality certification. See Tunbridge Mill Corporation, 68 FERC at p. 61,389; and Joseph M. Keating, 57 FERC ¶ 61,261 (1991), reh'g denied, 61 FERC ¶ 61,215 (1992).

10/ 16 U.S.C. § 811.

(1) The licensee shall construct downstream fish passage facilities as generally depicted in the license application Exhibits F-5 and F-6, during the first summer/fall after license issuance, and have them operational by April 1 of the year following construction. The licensee shall develop and submit to the Fish and Wildlife Service, final design drawings of the facilities within 3 months of issuance [of] the license. The designs shall be developed in consultation with and final design drawings shall meet with the approval of the Fish and Wildlife Service. The licensee shall construct the facility as in the approved final designs. The licensee shall provide as-built drawings to the Fish and Wildlife Service following fishway construction. The construction schedule may be modified by the Fish and Wildlife Service as necessary and appropriate.

The flows needed for operation of the facility and attraction to the facility will be released during the operation of the fishway.

The downstream passage facilities shall be operated as necessary and appropriate from April 1 through June 30 and October 1 through November 30 for the passage of Atlantic salmon smolts and parr. This schedule can be modified by the Fish and Wildlife Service as appropriate based on available information and on-site conditions.

(2) [The licensee] shall, in the interim before completion of permanent downstream passage facilities, release a minimum of 24 inches of spill over the 3-foot-wide stoplog weir adjacent to the trashracks to serve as an interim downstream bypass facility. This facility shall be operated from April 1 through June 30 and October 1 through November 30. This schedule can be modified by the Fish and Wildlife Service as appropriate based on available information and on-site conditions.

(3) The licensee shall construct an upstream fishway at the project when so prescribed by the Secretary of the Interior. The licensee shall develop and submit to the Fish and Wildlife Service, functional design drawings of the facilities within six months from the issuance of a Prescription or Commission order requiring construction of an upstream fishway. The designs shall be developed in consultation with, and final design drawings shall meet with the approval of, the Fish and Wildlife Service. The licensee shall

construct the facility as depicted in the approved final designs. The licensee shall provide as-built drawings to the Fish and Wildlife Service following fishway construction. The construction schedule may be modified by the Fish and Wildlife Service as necessary and appropriate.

The flows needed for operation of the facility and attraction to the facility will be released during the operation of the fishway. Once constructed, the upstream passage facilities shall be operated throughout the appropriate seasons for upstream passage.

(4) The Department of the Interior reserves the right to modify its Section 18 Fishway Prescription as needed to facilitate fish passage.

A. Condition (1)

The facilities described in Condition (1), the schedule establishing the months of the year when the facilities will operate, the maintenance of appropriate flows within the fish passage facility necessary for the effective passage of fish, and the requirement that the final design drawings meet with the approval of FWS are fishway prescriptions within the meaning of Section 18 and are therefore required by Article 407 of the license. 11/ Although not Section 18 fishway prescriptions, Interior's recommended schedules for submitting final design drawings to the U.S. Fish and Wildlife Service (FWS) and for constructing the fishway are reasonable, and we accordingly include them as conditions of the license. 12/

B. Condition (2)

The interim measures required by Condition (2) do not qualify as a Section 18 prescription, because they do not prescribe a structure, facility, or device to pass fish, nor do they prescribe project operations related to such a structure, but rather modify operations of the existing project

11/ The Commission however retains the right of final approval of the fishway, as of all project works. See Niagara Mohawk Power Corporation, 67 FERC ¶ 61,300 at p. 62,038 (1994).

12/ These conditions deal with matters that are properly the Commission's responsibility. Id. at p. 62,039.

works. 13/ We will therefore consider them as a fish and wildlife recommendation under Section 10(j) of the FPA, and, as discussed below, adopt them in Article 406.

B. Conditions (3) and (4)

Condition (3) is essentially a request to reserve Interior's authority to prescribe upstream fish passage facilities. The specific requirements listed in Condition (3) are premature, since Interior is not yet ready to prescribe an upstream facility. 14/ We will treat Condition (4) as a request to reserve authority to prescribe a fishway. Therefore, Article 409 reserves authority to the Commission to require such fishways as Interior may prescribe.

RECOMMENDATIONS OF FISH AND WILDLIFE AGENCIES PURSUANT TO SECTION 10(J) OF THE FPA

Section 10(j) of the FPA requires the Commission to include license conditions, based on recommendations of federal and state fish and wildlife agencies submitted pursuant to the Fish and Wildlife Coordination Act, for the protection of, mitigation of adverse impacts to, and enhancement of fish and wildlife resources, unless such conditions would conflict with the FPA or other law.

The license for the Apthorp Project includes license conditions consistent with the agencies' Section 10(j) recommendations: (1) operate the project run of river (Article 402); (2) install devices to monitor run-of-river operations (Article 405); (3) provide for interim downstream fish passage (Article 406); (4) New Hampshire Fish and Game's recommendation to provide for future installation of upstream fish passage facilities (Article 409's reservation of Interior's authority to prescribe fishways); (5) minimize extended periods without flow releases below the project during project shut-downs (Article 403); (6) require a minimum flow release during periods of impoundment refilling (Article 404); and (7) require a plan to monitor the effectiveness of the downstream fish passage facilities (Article 408).

New Hampshire Fish and Game also recommended that the licensee be required to develop a recreational access plan. We did not consider this as a recommendation made pursuant to Section 10(j), in that it does not provide measures for the

13/ See Northern Wasco County People's Utility District, 57 FERC ¶ 61,214 at p. 61,707 (1991).

14/ See Tunbridge Mill Corp., supra, 68 FERC at p. 61,385.

protection, mitigation of damages to, and enhancement of fish and wildlife resources. 15/ We have, however, considered this recommendation under Section 10(a)(1) of the FPA, pursuant to which the Commission considers all aspects of the public interest, and we adopt it in Article 411. 16/

COMPREHENSIVE PLANS

Section 10(a)(2)(A) of the FPA requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing or conserving a waterway or waterways affected by the project. 17/ Under this section, federal and state agencies filed 15 plans that address various resources in New Hampshire. Of these, we identified and reviewed nine plans relevant to this project. 18/ We find that, with the inclusion of the

15/ See Mead Corporation, 72 FERC ¶ 61,027 at p. 61,070 (1995).

16/ In comments on the draft EA, Trout Unlimited requested that, if public access to the project area and a canoe portage route around the dam were not feasible, then Clark should be required to consider similar recreation measures at White Mountain's exempted Lisbon Project No. 3464, located on the Ammonoosuc River eleven miles downstream. We will not require Clark to undertake recreational measures at another project which is not a part of this proceeding.

17/ Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (1995).

18/ (1) New Hampshire Outdoors, 1988-1993, New Hampshire Office of State Planning; (2) Public Access Plan for New Hampshire's Lakes, Ponds, and Rivers, 1991, New Hampshire Office of State Planning; (3) A Strategic Plan for the Restoration of Atlantic Salmon to the Connecticut River Basin, 1982, Policy Committee for Fisheries Management of the Connecticut River; (4) New Hampshire Rivers Management and Protection Plan, 1991, State of New Hampshire; (5) Act Designating Segments of the Connecticut River for New Hampshire's Management and Protection Program, 1992, State of New Hampshire; (6) Connecticut River Basin Fish Passage, Flow, and Habitat Alteration Considerations in Relation to Anadromous Fish Restoration, 1981, Technical Committee for Fisheries Management of the Connecticut River; (7) Final Environmental Impact Statement - Restoration of Atlantic Salmon to New England Rivers, 1989, U.S. Fish and Wildlife Service; (8) Fisheries USA, the Recreational Fisheries Policy of the U.S. Fish and Wildlife Service, U.S. Fish and

(continued...)

recommended mitigation and enhancement measures, the project will not conflict with any of these plans.

INTERVENOR CONCERNS

Trout Unlimited's intervention purports to oppose issuance of a license for this existing project, but provides no reasons for its opposition. It simply asks that the environmental analysis for the project (1) address the project's impact on river flows, water quality, fishery resources, and recreation, and (2) consider the cumulative effects of the Apthorp dam and three other downstream dams on the Ammonoosuc River. The EA identifies four downstream dams on the Ammonoosuc River, one dam upstream of the Apthorp Project, and six dams located on the main stem of the Connecticut River downstream of the confluence with the Ammonoosuc. The EA addresses project-specific impacts to the area's resources and cumulative impacts on these resources resulting from existing hydropower projects in the Connecticut River Basin, with particular emphasis on the Ammonoosuc River, and recommends appropriate conditions for inclusion in any license issued for the Apthorp Project.

COMPREHENSIVE DEVELOPMENT

Sections 4(e) and 10(a)(1) of the FPA require the Commission, in acting on applications for license, to give equal consideration to the power and development purposes and to the purposes of energy conservation, the protection, mitigation, and enhancement of fish and wildlife resources, the protection of recreational opportunities, and the preservation of other aspects of environmental quality. 19/ Any license issued shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration. For the reasons discussed below, we conclude that the Apthorp Project does not conflict with any planned or authorized development and is best adapted to the comprehensive development of the waterway for beneficial public uses.

If licensed according to the terms of this order, including the increased generating capacity and the installation and operation of the downstream fish passage facility, the power

18/(...continued)
Wildlife Service; and (9) The Nationwide Rivers Inventory, 1982, National Park Service.

19/ 16 U.S.C. §§ 797(e) and 803(a)(1).

produced from the project would cost approximately a minimum of 5 mills/kWh less than currently available alternative power. 20/

Based on our review and evaluation of the project as proposed by Clark, and with the additional enhancement measures we are adopting, we are issuing a license for the Apthorp Dam Project No. 11313. Operating the project in the manner required by the license will protect and enhance fish and wildlife resources, water quality, recreational resources, and cultural resources. The electricity generated from renewable water power resources will be beneficial, because it will offset the use of fossil-fueled, steam-electric generating plants, thereby conserving nonrenewable resources and reducing atmospheric pollution. We therefore find that the Apthorp Dam Project No. 11313, with the required environmental enhancement measures, is best adapted to a comprehensive plan for the use, conservation, and development of the waterway for beneficial public purposes.

TERM OF LICENSE AND BACK ANNUAL CHARGES

Because the Apthorp Project will involve a moderate amount of development at an existing dam, i.e., the addition of capacity and the construction of a downstream fish passage facility, the term of this license will be 40 years.

As set forth in City of Danville, Virginia, 58 FERC ¶ 61,118 (1992), in the case of licenses issued to previously unauthorized existing projects, the license term is prospective only. However, it is the Commission's policy to condition the license upon payment of an amount equivalent to any additional charges that would have been collected, had the license been backdated to when it first should have been issued. 58 FERC at pp. 62,020-21.

In May 1987, the Commission issued an order in Clifton Power Corporation, 39 FERC ¶ 61,117, in which it substantiated that there is a national class of small hydroelectric projects (such as the Apthorp Project) that, because of their connection to the interstate electric grid, affects interstate commerce in a real and substantial way. Therefore, if not before, then certainly after that date, all concerned were on notice that the project was required to be licensed. We will accordingly assess back

20/ The Commission's new method of assessing a project's economics is described in Mead Energy Corporation, supra n. 15. See pages 8 and 9 of the Safety and Design Assessment dated August 23, 1995, which is in the public file of this proceeding.

annual charges from May 1, 1987, the month and year in which Clifton was issued, to September 30, 1994. 21/

SUMMARY OF FINDINGS

Background information, analysis of impacts, support for related license articles, and the basis for a finding of no significant impact on the environment are contained in the EA. Issuance of this license is not a major federal action significantly affecting the quality of the human environment.

The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if constructed, operated, and maintained in accordance with the requirements of this license. Analysis of related issues is provided in the Safety and Design Assessment, which is available in the Commission's public file.

Based upon our review of the record in this proceeding, we conclude that the Apthorp Project would not conflict with any planned or future development and is best adapted to the comprehensive development of the affected waterway for beneficial public uses.

The Commission orders:

(A) This license is issued to Edward M. Clark (Licensee) for a period of 40 years, effective the first day of the month in which this order is issued, to operate and maintain the Apthorp Dam Project. This license is subject to the terms and conditions of the FPA, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

(1) All lands, to the extent of the Licensee's interests in those lands shown by Exhibit G, filed on July 30, 1992.

(2) Project works consisting of: (a) an existing concrete dam, reconstructed in 1936, 20 feet high and 227.8 feet long, with four-foot-high flashboards across the spillway portion; (b) an existing reservoir with a surface area of 20 acres and a gross storage volume of 210 acre-feet at the normal maximum surface elevation of 860.9 feet U.S. Geological Survey datum; (c)

21/ See City of Danville, Va., 58 FERC at pp. 62,021-22. As of October 1, 1994, the Commission is not assessing annual charges for projects with less than 1,500 kilowatts authorized installed capacity.

an existing gated section containing (i) a steel mudgate, approximately four feet high by five feet wide, and (ii) a steel sluice gate, approximately six feet high by 7.7 feet wide; (d) a proposed downstream fish passage facility; (e) an existing penstock intake structure containing (i) steel trashracks with existing clear bar spacing of 1-5/8 inches, and (ii) three manually operated vertical slide gates, each four feet wide by eight feet high; (f) a concrete culvert, ten feet long by 14 feet square; (g) an eight-foot-diameter riveted steel penstock, 64 feet long, conveying flow from the culvert to the powerhouse; (h) a proposed six-foot-diameter, spiral welded steel penstock, eight feet long (branching from the existing eight-foot-diameter penstock to supply the proposed turbine); (i) an existing powerhouse with a brick superstructure and combined concrete and timber substructure containing (i) an existing Kaplan propeller turbine, capable of producing 425 kW at 22 feet of net head with a hydraulic capacity of 260 cubic feet per second (cfs), (ii) an existing generator, rated at 425 kW, (iii) a proposed Kaplan propeller turbine, manufactured by S. Morgan Smith, capable of producing 175 kW at 22 feet of net head with a hydraulic capacity of 120 cfs (yielding a proposed plant hydraulic capacity of 380 cfs), and (iv) a proposed vertical, salient pole, generator rated at 175 kW (yielding a total plant rating of 600 kW); (j) an existing primary transmission line, about 100 feet long; and (k) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of Exhibits A and F below:

Exhibit A - The following sections of Exhibit A filed on July 31, 1992 and additional information, filed on March 3, 1993:

Sections i, ii, iii, iv, v, vi, vii, and viii.

Exhibit F - The following Exhibit F drawings filed on July 31, 1992 and March 3, 1993:

Exhibit	FERC No.	Showing
F-1	11313-1	Plan View of Dam
F-2	11313-2	Sections of Dam and South Abutment
F-3	11313-3	Plan View of Powerhouse and Penstock Intake Structure
F-4	11313-4	Sections of Powerhouse and Penstock Intake Structure

F-5	11313-5	Plan and Section of Upstream Fish Passage
F-6	11313-6	Section of Downstream Fish Passage
F-7	11313-7	Plan and Sections of Waste Gate
F-8	11313-8	Plan and Section of Penstock Intake Structure

(2) All of the structures, fixtures, equipment or facilities used to operate or maintain the project, all portable property that may be employed in connection with the project, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) The Exhibits A, F, and G described above are approved and made part of the license.

(D) The following sections of the FPA are waived and excluded from the license for this minor project:

4(b), except the second sentence; 4(e), insofar as it relates to approval of plans by the Chief of Engineers and the Secretary of the Army; 6, insofar as it relates to public notice and to the acceptance and expression in the license of terms and conditions of the FPA that are waived here; 10(c), insofar as it relates to depreciation reserves; 10(d); 10(f); 14, except insofar as the power of condemnation is reserved; 15; 16; 19; 20; and 22.

(E) This license is subject to the articles set forth in Form L-15 (October 1975), entitled "Terms and Conditions of License for Unconstructed Minor Project Affecting the Interests of Interstate or Foreign Commerce," except Article 15, and the following additional articles:

Article 201. The licensee shall pay the United States the following annual charges:

1. From May 1, 1987, to September 30, 1994, for the purpose of reimbursing the United States for the cost of administration of Part I of the FPA, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 425 kW.

2. From October 1, 1995, through September 30, 2035, for the purpose of reimbursing the United States for the cost of administration of Part I of the FPA, as determined by the

Commission, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 600 kW. Under the regulations currently in effect, projects with authorized installed capacity of less than or equal to 1,500 kW will not be assessed an annual charge.

Article 202. The Licensee shall clear and keep clear to an adequate width all lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which result from maintenance, operation, or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clear of lands and disposal of unnecessary material shall be done with due diligence to the satisfaction of the authorized representative of the Commission and in accordance with appropriate federal, state, and local [illegible]

Article 301. The Licensee shall [illegible] increase the project's generating [illegible] the issuance date of the license and [illegible] to increase the project's generating [illegible] from the issuance of the license.

Article 302. The Licensee shall, at least [illegible] the start of construction, submit one copy [illegible] Regional Director and two copies to the Commission [illegible] shall be a courtesy copy to the Director, Division [illegible] and Inspections), of the final contract drawings and specifications for pertinent features of the project, such as the powerhouse, and water retention and conveyance structures. The Commission may require changes in the plans and specifications to assure a safe and adequate project. If the Licensee plans substantial changes to location, size, type, or purpose of the water retention structures, powerhouse, or water conveyance structures, the plans and specifications must be accompanied by revised Exhibit F and G drawings as necessary.

Article 303. Within 90 days of completion of construction, the Licensee shall file for approval, revised Exhibits A, F, and G to describe and show the project as built.

Article 401. Within 180 days from the date of issuance of this license, the Licensee shall file with the Commission, for approval, a plan to monitor dissolved oxygen (DO) levels and temperature in the project impoundment and in the Ammonoosuc River upstream and downstream of the Apthorp Project during the critical summer period, from June through September.

The purpose of this monitoring plan is to ensure that the Licensee maintains, in the impoundment and immediately downstream of the Apthorp Project, a DO concentration of no less than 75 percent saturation and water temperatures that do not appreciably interfere with the fishery resources and recreational use of that stretch of the Ammonoosuc River.

The Licensee shall prepare the plan in consultation with the New Hampshire Department of Environmental Services Division of Water Supply and Pollution Control (New Hampshire DES-WSPC), the New Hampshire Fish and Game Department (New Hampshire Fish and Game), and the U.S. Fish and Wildlife Service (FWS). The plan shall include provisions for: (1) monitoring of DO and temperature above the Apthorp impoundment and downstream of the Apthorp powerhouse; (2) collecting DO and temperature profile data in the Apthorp impoundment; (3) the sensor locations and monitoring frequency; and (4) operating procedures to address water quality conditions which deviate from the above DO and temperature criteria. The plan shall also include schedules for: (1) [illegible] in consultation with the New Hampshire DES-WSPC, New Hampshire Fish and Game, and the FWS concerning the [illegible] of the monitoring and its filing the results, along with agency comments and the Licensee's responses.

The Licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The Licensee shall allow a minimum of 10 days for the agencies to comment and make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

Should the results of monitoring indicate that changes in project operation are necessary to ensure maintenance of a DO concentration of no less than 75 percent saturation and water temperatures that do not appreciably interfere with the fishery resources and recreational use of that stretch of the Ammonoosuc River, the Commission may direct the Licensee to modify project operations.

Article 402. The Licensee shall operate the project in a run-of-river mode for the protection of water quality and aquatic resources in the Ammonoosuc River. The Licensee shall at all times act to minimize the fluctuation of the impoundment surface elevations by maintaining a discharge from the project so that,

at any point in time, flows, as measured immediately downstream from the project tailrace, approximate the sum of inflows to the project impoundment. Under normal operating conditions, the Licensee shall maintain the elevation of the Apthorp impoundment at a target elevation of 860.9 feet U.S. Geological Survey datum, with a fluctuation of no greater than ± 4 inches around the target elevation.

Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the Licensee, or for short periods upon mutual agreement between the Licensee and New Hampshire Fish and Game. If the flow is so modified, the Licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident. Further, the Licensee shall notify New Hampshire Fish and Game at least 30 days prior to initiating any planned interruptions to downstream flows or drawdowns to the project impoundment.

Article 403. Within 180 days from the date of issuance of this license, the Licensee shall file with the Commission, for approval, a plan to minimize extended periods without flow releases downstream from the Apthorp Project.

The purpose of this plan is to ensure that, during periods when the project is shut down and the impoundment elevation is below the crest of the flashboards, extended periods without flow releases below the project are minimized. The plan shall include provisions for: (1) the preparation of enhancement measures developed in consultation with New Hampshire Fish and Game and the U.S. Fish and Wildlife Service (FWS) to minimize, to the extent possible, extended periods without flow releases downstream of the project; (2) monitoring downstream flow releases (as required by Article 405 of this license); and (3) developing a schedule for implementing any, or all, of the enhancement measures identified in the plan.

The Licensee shall prepare the plan after consultation with New Hampshire Fish and Game and the FWS. The Licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

Article 404. When refilling the project impoundment after flashboard installation or an emergency drawdown, the Licensee shall operate the project such that a minimum flow of 90 cubic feet per second (cfs), or 90 percent of inflow to the project impoundment, whichever is less, as measured in the Ammonoosuc River downstream of the Apthorp Project, is released from the Apthorp Project into the Ammonoosuc River for the protection of fishery resources downstream of the Apthorp Project.

This flow may be temporarily modified if required by operating emergencies beyond the control of the Licensee, or for short periods of time upon mutual agreement between the Licensee, New Hampshire Fish and Game, and the U.S. Fish and Wildlife Service. If the flow is so modified, the Licensee shall notify the Commission as soon as possible, but no later than ten days after each such incident.

Article 405. Within 180 days after the date of issuance of this license, the Licensee shall file with the Commission, for approval, a plan to monitor compliance with the run-of-river mode of operation and flow continuation requirements as stipulated by Articles 402, 403, and 404 of this license. The monitoring plan shall include provisions for using the existing U.S. Geological Survey (USGS) streamflow gaging station (USGS Gage No. 01137500), the existing control features, the proposed stage recorder, staff gages, and/or other appropriate monitoring/control features, to determine instantaneous headpond and tailwater elevations, flows through the fish passage facilities (including the downstream fish bypass and the fish ladder, when required), and water surface elevations and flows in the Ammonoosuc River downstream of the project dam.

The plan shall include, but not be limited to, the proposed location, design, and calibration of the monitoring equipment, the method of flow data collection, a provision for providing flow data to the U.S. Fish and Wildlife Service (FWS), the USGS, and New Hampshire Fish and Game within 30 days from the date of the agency's request for the data. The monitoring plan shall also include schedules for: (1) implementation; (2) consultation with the appropriate federal and state agencies concerning the data from the monitoring; and (3) filing the data, along with agency comments and the Licensee's responses.

The Licensee shall prepare the plan after consultation with the FWS, the USGS, and New Hampshire Fish and Game. The Licensee shall include with the plan documentation of consultation and copies of comments or recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agency comments are accommodated by the plan. The Licensee shall allow a minimum of 30 days for the

agencies to comment and to make recommendations prior to filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

Article 406. Within 180 days after the date of issuance of this license, the Licensee, in consultation with the U.S. Fish and Wildlife Service, and New Hampshire Fish and Game, shall develop and implement interim downstream fish passage measures that would ensure safe passage of Atlantic salmon smolts and parr from April 1 through June 30 and October 1 through November 30, respectively, until the permanent downstream fish passage facilities required by Article 407 of this license can be constructed and operational. The interim downstream fish passage measures shall include releasing a minimum of 24 inches of spill over the 3-foot-wide stoplog weir adjacent to the trashracks.

Article 407. The Licensee shall install, operate, and maintain permanent downstream fish passage facilities at the Apthorp Project, as generally depicted in Exhibits F-5 and F-6 of the license application to reduce fish entrainment and provide efficient downstream fish passage past the project. The downstream fish passage facilities shall be constructed by November 1, 1996, and be operational by April 1, 1997. The Licensee shall operate the downstream fish passage facilities from April 1 through June 30, and from October 1 through November 30 each year.

Within 180 days after the date of issuance of this license, the Licensee shall file with the Commission, for approval, a plan for permanent downstream fish passage that includes functional design drawings of the Licensee's proposed downstream fish passage facilities, quantification of the flows required to operate the proposed facilities, an operation and maintenance plan, and a schedule for installing the facilities.

The Licensee shall prepare the permanent downstream fish passage plan after consultation with the U.S. Fish and Wildlife Service and New Hampshire Fish and Game. The Licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the drawings, flow requirements, and the installation/operational schedule after they have been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the Licensee's plan. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the Licensee does not adopt a

recommendation, the filing shall include the Licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission. These facilities shall be shown on the as-built drawings filed pursuant to this license.

Article 408. Within 180 days after the date of issuance of this license, the Licensee shall file with the Commission, for approval, a plan to monitor the effectiveness of the permanent downstream fish passage facilities and associated operational flows to efficiently pass fish downstream of the project.

The plan shall include provisions for: (1) describing facility oversight and personnel commitments and (2) identifying back-up equipment and supplies that would be maintained to ensure efficient and consistent operation of the facilities. The monitoring plan shall also include a schedule for: (1) implementation of the plan; (2) consultation with the appropriate federal and state agencies concerning the results of the monitoring; and (3) filing the results, agency comments, and Licensee's response to agency comments with the Commission.

The Licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service and New Hampshire Fish and Game. The Licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

If the results of the monitoring indicate that changes in project structures or operations, including alternative flow requirements, are necessary to protect fish resources, the Commission may direct the Licensee to modify project structures or operations.

Article 409. Authority is reserved to the Commission to require the Licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of such

fishways, or reasonable modifications to such fishways, as may be prescribed by the Secretary of the Interior or the Secretary of Commerce.

Article 410. The Licensee, before starting any land-clearing or land-disturbing activities within the project area, other than those specifically authorized in this license, including recreation developments at the project, shall consult with the State Historic Preservation Officer (SHPO).

If the Licensee discovers archeological or historic properties during the course of constructing or developing project works or other facilities at the project, the Licensee shall stop all land-clearing and land-disturbing activities in the vicinity of the properties and consult with the SHPO.

In either instance, the Licensee shall file for Commission approval a cultural resource management plan prepared by a qualified cultural resource specialist after having consulted with the SHPO. The plan shall include the following items: (1) a description of each discovered property indicating whether it is listed on or eligible to be listed on the National Register of Historic Places; (2) a description of the potential effect on each discovered property; (3) proposed measures for avoiding or mitigating effects; (4) documentation of the nature and extent of consultation; and (5) a schedule for mitigating effects and conducting additional studies. The Commission may require changes to the plan.

The Licensee shall not begin land-clearing or land-disturbing activities, other than those specifically authorized in this license, or resume such activities in the vicinity of a property, discovered during construction, until informed by the Commission that the requirements of this article have been fulfilled.

Article 411. Within 180 days from the date that the project license is issued, the Licensee shall prepare a public recreation feasibility report to determine if public access to the Apthorp Project impoundment and the Ammonoosuc River downstream of the project (tailwater area) is feasible. The report shall discuss the feasibility of providing a canoe portage route. If public recreation access is determined to be feasible, the report shall include a recreation access plan that includes, but is not limited to: (1) drawings and specifications for public access to the Apthorp Project impoundment and the Ammonoosuc River downstream of the project (tailwater area), including a canoe portage route; (2) soil erosion control and revegetation measures to be implemented during construction of the facilities; (3) a discussion of how the needs of the disabled were considered in the design of the facilities; (4) a description of the signs to

be used to identify the recreational facilities; and (5) a construction schedule.

The Licensee shall prepare the report in consultation with the New Hampshire Fish and Game Department and the U.S. Department of the Interior. The Licensee shall include with the report documentation of consultation and copies of comments and recommendations on the completed report after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments and recommendations are accommodated by the report. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the results of the report with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the feasibility report and recreation access plan. Upon Commission approval, the Licensee shall implement the recreation access plan, including any changes required by the Commission.

Article 412. (a) In accordance with the provisions of this article, the Licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The Licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the Licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the Licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the Licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the Licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar

structures and facilities that can accommodate no more than ten watercraft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other wildlife enhancement. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the Licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The Licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the Licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the Licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the Licensee's costs of administering the permit program. The Commission reserves the right to require the Licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The Licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69 kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the Licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The Licensee may convey fee title to, easements or rights-of-way across, or leases of projects lands for:

(1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than ten watercraft at a time and are located at lease one-half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at norman surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 60 days before conveying any interest in project lands under this paragraph (d), the Licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the Licensee to file an application for prior approval, the Licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:

(1) Before conveying the interest, the Licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the SHPO.

(2) Before conveying the interest, the Licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or

otherwise be incompatible with overall project recreational use; (ii) the grantee shall take all reasonable precautions to insure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project; and (iii) the grantee shall not unduly restrict public access to project waters.

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G or K drawings would be filed for approval for other purposes.

(g) The authority granted to the Licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(F) The Licensee shall serve copies of any Commission filing required by this order on any entity specified in this order to be consulted on matters related to that filing. Proof of service on these entities must accompany the filing with the Commission.

(G) This order is final unless a request for rehearing is filed within 30 days from the date of issuance, as provided in Section 313(a) of the FPA. The filing of a request for rehearing does not operate as a stay of the effective date of this order or of any other date specified in this order, except as specifically ordered by the Commission. The Licensee's failure to file a request for rehearing shall constitute acceptance of this order.

By the Commission.

(S E A L)

Lois D. Cashell,
Secretary.

SITE INTERCONNECTION REPORT

APTHORP HYDRO ELECTRIC PLANT

LITTLETON, NH 03561

OWNER: WHITE MOUNTAIN HYDRO ELECTRIC CORP.

CONTACT: TOM CLARK, PRESIDENT

UTILITY CONNECTED TO: TOWN OF LITTLETON, LITTLETON WATER AND LIGHT DEPT. LITTLETON, NH

PREPARED BY: W. N. CLEWES

DATE: 25 OCTOBER 2012

STATUS: **Rev # 1**

1: Report scope

No formal interconnection study was ever required, requested or accomplished at the time White Mountain Hydro (WMH) took over operation and ownership of the Apthorp Hydro facility from Town of Littleton, Littleton Water and Light Dept (LWL).
LWL has no written or informal standards for interconnection of a non utility generation (NUG) facility to the LWL system. This report documents what is presently installed at the Apthorp Hydro Facility.
This interconnection study was requested as part of the process to obtain renewable energy credits capability for Apthorp Hydro site.
This document describes the existing hydro electric generator located at Apthorp Hydro Electric Station, located in Littleton, NH and the interconnection to the power grid of Littleton Water and Light Dept, a municipal owned electric utility operation.

2: Description of major components

A: Facility
Street Address: 82 Carlton St, Littleton, NH 03561

This facility was originally owned and operated by Littleton Water and Light Dept (LWL). Site was taken over by WMH. The date of operation by White Mountain Hydro Electric Corp. (WMH) was 1979. The station was operated as a lease of the dam and property from Littleton water and Light Dept. The dam was purchased by White Mountain Hydro from The Town of Littleton New Hampshire, this occurred in 1991.

Description of the facility:

Apthorp hydro electric plant is situated in Littleton, NH and receives water from the Ammonussic River impounded behind FERC dam #11313NH. All electrical output is delivered to LWL 4.16 KV circuit #41.

B: Equipment

1: Generator:
General Electric model: ATB44, S/N:1423820 , Vertical configuration, synchronous, 425 KW, 2300 Volt, delta wound, 0.8 PF, 257 RPM

2: Exciter
Basler type SSE 125-13 static excitation system with automatic var control. Excitation power is derived from the output of the generator. The exciter power transformer is connected to the generator side of the circuit breaker.

3: Generator step up transformer rated: 2400 volt delta voltage input, 4160 wye high side.
High side neutral ungrounded.
GSU is comprised of three single phase transformers banked together, each rated 167 KVA, 2400 / 4160 volts.
Fusing is installed on the 4.16KV side. Fuses were selected by Littleton Water and Light dept.

4: Generator circuit breaker
General electric type FK rated 5KV, 600 amps non drawout electrically operated solenoid close oil circuit breaker. Breaker tripping is accomplished via an installed shunt trip and station 125 VDC 100 AH battery bank.

C: Switchboard and protection and control

This site incorporates a switchboard designed and built by Mr. Frank Hubley of Sugar Hill, NH (now deceased) Included within the switchboard are the normal protection and control features for a generator of this size. No specific requirements were ever issued to the site by the electric utility related to protection, control, or operation of the generator.

Inverse time over current each phase
Reverse power
Loss of excitation via DC current monitor
Generator over voltage
Bus over and under frequency
Generator thermal over current
Generator over speed
Time / inst neutral stator unbalance current
Generator under voltage
Upper guide bearing thermal protection
Lower guide bearing over temperature
Thrust bearing over temperature.

D: Mechanical Components

1 Turbine
S Morgan Smith Kaplan style turbine
Model: SO 67248, 420HP, 257 RPM, 17 ft. Head

2 Governor
Lombard model MV governor, S/N 2928

3: Interconnect / Point of Service

The interconnect / point of service is LWL circuit #41 pole #41E8, located on Carlton St. adjacent to the hydro plant property.
Facility is connected to the utility circuit via 3 pole gang operated disconnect switch owned by White Mountain Hydro Inc.

Operation of the 3 phase ganged disconnect switch is permitted to be accomplished by either party. The operating mechanism handle is normally double locked in the closed position. This switch is capable of being locked and red tagged in the open position by either party.

Metering:
Metering of the output of the facility is accomplished via a KWH multifunction meter installed and owned by Littleton water and Light Dept. The required potential and current transformers are located 4.16 KV side of the generator step up transformer bank.
Metering potential and current transformers are property of White Mountain Hydro. The KWH meter is owned by Littleton water and Light Dept.

Report by: W. N. Clewes
William Clewes Technical Services Inc.
141 Riverview Drive
Littleton, NH 03561
clewtec@roadrunner.com
603 444 2949 office
603 303 6442 cell

Reviewed by: Thomas Considine Date: 11.5.12

Littleton Water and Light Dept.
65 Lafayette Ave.
Littleton, NH 03561
603 444 2915